



## Note-taking Worksheet

# Rocks

## Section 1 The Rock Cycle

- A. \_\_\_\_\_—mixture of minerals, volcanic glass, organic matter, or other material
- B. \_\_\_\_\_—model showing processes that create and change rock
- \_\_\_\_\_ rock can be changed by heat and pressure into metamorphic rock.
  - \_\_\_\_\_ rock can melt and cool to form igneous rock.
  - \_\_\_\_\_ rock can be broken into fragments that may later form sedimentary rock.
- C. Conservation of \_\_\_\_\_—rock cycle never destroys elements of rocks but merely redistributes them
- D. \_\_\_\_\_ recognized the rock cycle in 1788 by observing Siccar Point, Scotland.

## Section 2 Igneous Rock

- A. \_\_\_\_\_ form from magma found deep under Earth's surface.
- Magma reaching the surface flows from a volcano as \_\_\_\_\_.
  - Magma trapped below the surface forms large-grained \_\_\_\_\_ igneous rock when it cools.
  - Magma cooling at or near Earth's surface forms small-grained \_\_\_\_\_ igneous rock.
  - \_\_\_\_\_ igneous rocks are dark-colored and dense.
    - Contain \_\_\_\_\_ and \_\_\_\_\_ but very little silica
    - Basaltic lava flows \_\_\_\_\_ from a volcano.
  - \_\_\_\_\_ igneous rocks are lower density and lighter color.
    - Contain more \_\_\_\_\_ and less iron and magnesium
    - Granitic magma is \_\_\_\_\_ and \_\_\_\_\_.
  - \_\_\_\_\_ rocks have a more balanced composition of minerals and density than basaltic or granitic rocks.
  - Crystal \_\_\_\_\_, large or small, can help identify an igneous rock as intrusive or extrusive.
  - Volcanic glass rocks \_\_\_\_\_ so quickly that few crystals form.
  - Some rocks have \_\_\_\_\_ formed around once-trapped air and other gases.

**Note-taking Worksheet (continued)**

B. Igneous rocks are \_\_\_\_\_ in two ways.

1. Where they formed—\_\_\_\_\_ (under the Earth's surface) or \_\_\_\_\_ (at or near the Earth's surface)
2. \_\_\_\_\_ type—basaltic, granitic, or andesitic

**Section 3 Metamorphic Rocks**

A. Metamorphic rocks—changed by \_\_\_\_\_, \_\_\_\_\_, and hot fluids

1. \_\_\_\_\_ and \_\_\_\_\_ result from one layer of rock on top of another layer.
  - a. Sometimes temperature and pressure are great enough to \_\_\_\_\_ rock, forming magma.
  - b. Sometimes pressure \_\_\_\_\_ mineral grains in rocks without melting them.
  - c. As pressure and temperature continue to increase over time, one type of rock can change into \_\_\_\_\_ metamorphic rocks.
2. Hot, water-rich \_\_\_\_\_ can move through rock, chemically changing it.

B. Classification of metamorphic rocks—by composition and \_\_\_\_\_

1. \_\_\_\_\_ texture—mineral grains flatten and line up in parallel layers or bands
2. \_\_\_\_\_ texture—mineral grains grow and rearrange but do not form layers

**Section 4 Sedimentary Rocks**

A. \_\_\_\_\_ rocks—mostly found on the exposed surface of Earth

1. Rock fragments, mineral grains, and bits of plants and animal remains moved by wind, water, ice or gravity are called \_\_\_\_\_.
2. Sedimentary rocks form in \_\_\_\_\_.

B. Sedimentary rocks—\_\_\_\_\_ by what they were made of and how they were formed

C. \_\_\_\_\_ sedimentary rocks—made from broken fragments of other rocks

1. When layers of small sediments stick together because of pressure, \_\_\_\_\_ occurs.
2. When water and other minerals move through open spaces between larger sediments, gluing them together, \_\_\_\_\_ occurs.
3. Detrital rocks often have a \_\_\_\_\_ texture.

## Note-taking Worksheet (continued)

4. Rocks are named according to \_\_\_\_\_ and \_\_\_\_\_ of sediments.
- Sediment size can be large like \_\_\_\_\_ or small like \_\_\_\_\_.
  - Sediments can be \_\_\_\_\_ or have \_\_\_\_\_ angles.
- D. Chemical sedimentary rocks—non-clastic rocks formed when dissolved \_\_\_\_\_ came out of solution
- Limestone forms from \_\_\_\_\_, which was calcium carbonate in solution.
  - Rock salt forms from \_\_\_\_\_, which was salt in solution.
- E. Organic sedimentary rocks—made from \_\_\_\_\_ of once-living plants or animals
- \_\_\_\_\_—made of microscopic calcite-shell remains of animals
  - \_\_\_\_\_—made of plant remains chemically changed by microorganisms and compacted over millions of years
- F. Rock cycle—a \_\_\_\_\_ and dynamic process



# ROCK CYCLE VOCAB

Igneous Rock

Sedimentary Rock

Metamorphic Rock

Weathering

Erosion

Deposition

Cementation

Compaction

Heat & Pressure

Melting & Cooling

Extrusive

Intrusive